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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,798	10/15/2003	Andrew R. Williams	15436.253.78.1	5123

7590 04/18/2008
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EXAMINER

TRAN, DZUNG D

ART UNIT	PAPER NUMBER
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2613

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04/18/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/685,798	Applicant(s) WILLIAMS, ANDREW R.	
	Examiner Dzung D. Tran	Art Unit 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☒ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413) |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) ☒ Information Disclosure Statement(s) (PTO/SB/08) | 5) ☐ Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>01/24/2008</u> | 6) ☐ Other: _____ |

DETAILED ACTION

Specification

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Levinson et al. US Publication no. 2002/0129379.

Regarding claim 1, Levinson discloses in Figures 4 and 5, a return path transmitter for use in conjunction with a local system that generates an analog RF data signal to be conveyed to a head end system, the return path transmitter comprising:

an RF signal receiver 106 of Figure 16 configured to receive and convert the analog RF data signal into digitized RF data samples (i.e., ADC converter 202), the RF signal receiver further configured to output a first data stream including the digitized RF data samples;

digital processing circuitry 204 configured to digitally process the first data stream and create corresponding digitally processed data;

a summing circuit 430 (i.e., MUX 231 of Figure 5) configured to sum the corresponding digitally processed data of the first data stream to create a combined digital data stream; and

an optical transmitter 209 configured to convert the combined digital data stream into a first optical data signal for transmission over an optical fiber to the head end system.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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4. Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 25-27 of U.S. Patent No. 7,257,328.

Although the conflicting claims are not identical, they are not patentably distinct from each other because Levinson discloses in claims 25-27, a return path transmitter for use in conjunction with a local system that generates an analog RF data signal to be conveyed to a head end system, the return path transmitter comprising:

an RF signal receiver configured to receive and convert the analog RF data signal into digitized RF data samples, the RF signal receiver further configured to output a first data stream including the digitized RF data samples;

digital processing circuitry configured to digitally process the first data stream and create corresponding digitally processed data. Levington does not specifically disclose the digital processing circuitry configured to determine a signal strength of the RF data signal by the reference to the first data stream and compute an analog amplification level for the RF data signal

5. Claims 17, 20 and 27 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 25-27 of U.S. Patent No. 7,257,328 in view of Bianu US Patent no. 6,757,910.

Regarding claim 17, Levinson discloses in claims 25-27, a return path transmitter for use in conjunction with a local system that generates an analog RF data signal to be conveyed to a head end system, the return path transmitter comprising:

an RF signal receiver configured to receive and convert the analog RF data signal into digitized RF data samples, the RF signal receiver further configured to output a first data stream including the digitized RF data samples;

digital processing circuitry configured to digitally process the first data stream and create corresponding digitally processed data. Levington does not specifically disclose the digital processing circuitry configured to determine a signal strength of the RF data signal by the reference to the first data stream and compute an analog amplification level for the RF data signal. Bianu in Figure 1 discloses digital processing circuitry 11 having signal strength meter 23 for determining a signal strength of the RF data signal. At the time of the invention was made, it would have been obvious to an artisan to include the signal strength meter 23 for determining a signal strength of the RF data signal. One of ordinary skill in the art would have been motivated to do that in order to detect the power of the optical signal.

Regarding claim 20, Bianu in Figure 1 discloses a LPF or BPF 22 for shaping the data stream in a frequency domain.

Regarding claim 27, Bianu in Figure 1 discloses microcontroller 26 for performing a spectrum analysis of the first data stream.

6. Claims 2-16, 18-19 and 28-29 are rejected under on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 25-27 of U.S. Patent No. 7,257,328 in view of Wala US Patent no. 6,836,660.

Regarding claims 2-4 and 18-19, Levinson discloses in claims 25-27, a return path transmitter for use in conjunction with a local system that generates an analog RF data signal to be conveyed to a head end system, the return path transmitter comprising:

an RF signal receiver configured to receive and convert the analog RF data signal into digitized RF data samples, the RF signal receiver further configured to output a first data stream including the digitized RF data samples;

digital processing circuitry configured to digitally process the first data stream and create corresponding digitally processed data. Levinson does not specifically disclose for the digital processing circuitry is further configured to determine a signal strength of the RF data signal by reference to the first data stream and compute an analog amplification level for the RF data signal by reference to the signal strength. Wala, from the same field of endeavor, discloses a digital processing circuitry configured to determine a signal strength of the RF data signal by reference to the first data stream and compute an analog amplification level for the RF data signal by reference to the signal strength (col. 18, lines 49-60). It would have been obvious to an artisan at the time of the invention was made to include the teaching of Wala in the apparatus of Levinson. One of ordinary skill in the art would have been motivated to do that in order to monitor the RF signal receive. Thus, it enhances system controlling.

Regarding claim 5, since amplifier is well known for amplifying a signal and since it is also well recognized that signal degrades as it travel down through the transmission path, it would have been obvious to an artisan at the time of the invention

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was made to include the amplifier in the apparatus of Levinson and Wala in order to restore the signal strength of the RF signal to a desirable level to obtain good quality signals.

Regarding claim 6, Levinson discloses means for receiving commands originating from the head end (i.e., see figure 14, page 4, paragraph 0057), said commands sent in response to the corresponding digitally processed data, wherein said commands when executed adjust an operation of the digital processing circuitry.

Regarding claims 7-13 and 21-26, Levinson discloses in Figures 8-10, wherein the digital processing circuitry is further configured to shape the first data stream in a frequency domain and equalize a gain of the RF data signal across a frequency range by reference to and manipulation of the first data stream and separate the first data stream into two or more frequency bands; separately filter noise from the two or more frequency bands; and recombine the two or more frequency bands to reform the first data stream with reduced noise.

Regarding claims 14-16, and 28-29, Wala a digital processing circuitry configured to determine a signal strength of the RF data signal by reference to the first data stream and compute an analog amplification level for the RF data signal by reference to the signal strength (col. 18, lines 49-60).

Response to Arguments

7. Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung D Tran whose telephone number is (571) 272-3025. The examiner can normally be reached on 9:00 AM - 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dzung Tran
04/13/2007

/Dzung D Tran/

Primary Examiner, Art Unit 2613